

Attorney Docket Number	3382-65134-01
Application Number	10/642,551
Filing Date	August 15, 2003
First Named Inventor	Thumpudi
Art Unit	2641
Examiner Name	

U.S. PATENT DOCUMENTS

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Issue Date	Name of Applicant or Patentee

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**INFORMATION DISCLOSURE STATEMENT
BY APPLICANT**

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Examiner's Initials*	Cite No. (optional)	Number	Issue Date	Name of Applicant or Patentee
/JR/		5,524,054	06-1996	Spille
/JR/		5,629,780	05-1997	Watson
/JR/		5,661,823	08-1997	Yamauchi et al.
/JR/		5,682,152	10-1997	Wang et al.
/JR/		5,701,346	12-1997	Herre et al.
/JR/		5,835,030	11-1998	Tsutsui et al.
/JR/		6,041,295	03-2000	Hinderks
/JR/		6,064,954	05-2000	Cohen et al.
/JR/		6,249,614	06-2001	Kolesnik et al.
/JR/		6,445,739	09-2002	Shen et al.
/JR/		6,658,162	12-2003	Zeng et al.
/JR/		6,738,074	05-2004	Rao et al.
/JR/		7,062,445	06-2006	Kadatch

FOREIGN PATENT DOCUMENTS

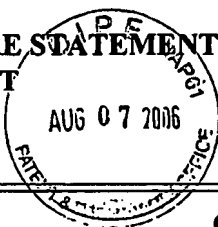
Examiner's Initials*	Cite No. (optional)	Country	Number	Publication Date	Name of Applicant or Patentee
/JR/		Europe	EP0597649	05-1994	Suzuki
/JR/		Europe	EP0669724	08-1995	Akagiri
/JR/		WIPO	WO 99/43110	08-1999	Absar et al.

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/JR/		Advanced Television Systems Committee, ATSC Standard: Digital Audio Compression (AC-3), Revision A, 140 pp. (1995).
/JR/		Beerends, "Audio Quality Determination Based on Perceptual Measurement Techniques," Applications of Digital Signal Processing to Audio and Acoustics, Chapter 1, Ed. Mark Kahrs, Karlheinz Brandenburg, Kluwer Acad. Publ., pp. 1-38 (1998).
/JR/		Bosi et al., "ISO/IEC MPEG-2 Advanced Audio Coding," Journal of the Audio Engineering Society, Audio Engineering Society, Vol. 45, No. 10, pages 789-812 (1997).
/JR/		Caetano et al., "Rate Control Strategy for Embedded Wavelet Video Coders," Electronics Letters, pp. 1815-17 (October 14, 1999).
/JR/		De Luca, "AN1090 Application Note: STA013 MPEG 2.5 Layer III Source Decoder," STMicroelectronics, 17 pp. (1999).
/JR/		de Queiroz et al., "Time-Varying Lapped Transforms and Wavelet Packets," IEEE Transactions on Signal Processing, Vol. 41, pp. 3293-3305 (1993).
/JR/		Dolby Laboratories, "AAC Technology," 4 pp. [Downloaded from the web site aac-audio.com on World Wide Web on November 21, 2001.]
/JR/		Fraunhofer-Gesellschaft, "MPEG Audio Layer-3," 4 pp. [Downloaded from the World Wide Web on October 24, 2001.]
/JR/		Fraunhofer-Gesellschaft, "MPEG-2 AAC," 3 pp. [Downloaded from the World Wide Web on October 24, 2001.]
/JR/		ISO/IEC 13818-7, Information technology - Generic coding of moving pictures and associated audio information - Part 7: Advanced Audio Coding (AAC), 150 pp. (1997).
/JR/		ITU, Recommendation ITU-R BS 1387, Method for Objective Measurements of Perceived Audio Quality, 89 pp. (1998).
/JR/		Kondoz, Digital Speech: Coding for Low Bit Rate Communications Systems, "Chapter 3.3: Linear Predictive Modeling of Speech Signals" and "Chapter 4: LPC Parameter Quantisation Using LSFs," John Wiley & Sons, pp. 42-53 and 79-97 (1994).
/JR/		Malvar, "Biorthogonal and Nonuniform Lapped Transforms for Transform Coding with Reduced Blocking and Ringing Artifacts," appeared in IEEE Transactions on Signal Processing, Special Issue on Multirate Systems, Filter Banks, Wavelets, and Applications, vol. 46, 29 pp. (1998).
/JR/		Malvar, "Lapped Transforms for Efficient Transform/Subband Coding," IEEE Transactions on Acoustics, Speech and Signal Processing, Volume 38, No. 6, pp. 969-78 (1990).
/JR/		Malvar, "Signal Processing with Lapped Transforms," Artech House, Norwood, MA, pp. iv, vii-xi, 175-218, and 353-57 (1992).

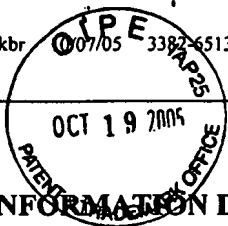
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Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS
/JR/		OPTICOM GmbH, "Objective Perceptual Measurement," 14 pp. [Downloaded from the World Wide Web on October 24, 2001.]
/JR/		Phamdo, "Speech Compression," 13 pp. [Downloaded from the World Wide Web on November 25, 2001.]
/JR/		Ribas Corbera et al., "Rate Control in DCT Video Coding for Low-Delay Communications," IEEE Transactions on Circuits and Systems for Video Technology, Vol. 9, No. 1, pp. 172-85 (February 1999).
/JR/		Search Report for European Patent Application No. 03 020 110.7.
/JR/		Search Report for European Patent Application No. 03 020 111.5.
/JR/		Shlien, "The Modulated Lapped Transform, Its Time-Varying Forms, and Its Application to Audio Coding Standards," IEEE Transactions on Speech and Audio Processing, Vol. 5, No. 4, pp. 359-66 (July 1997).
/JR/		Srinivasan et al., "High-Quality Audio Compression Using an Adaptive Wavelet Packet Decomposition and Psychoacoustic Modeling," IEEE Transactions on Signal Processing, Vol. 46, No. 4, pp. 1085-93 (April 1998).
/JR/		Terhardt, "Calculating Virtual Pitch," Hearing Research, 1:155-182 (1979).
/JR/		Wragg et al., "An Optimised Software Solution for an ARM Powered TM MP3 Decoder," 9 pp. [Downloaded from the World Wide Web on October 27, 2001.]
/JR/		Zwicker, Psychoakustik, Title Page, Table of Contents, "Teil I: Einführung," Index, Springer-Verlag, Berlin Heidelberg, New York, pp. II, IX-XI, 1-30, and 157-162 (1982).
/JR/		Zwicker et al., Das Ohr als Nachrichtenempfänger, Title Page, Table of Contents, "I: Schallschwingungen," Index, Hirzel-Verlag, Stuttgart, pp. III, IX-XI, 1-26, and 231-32 (1967).

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Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
/JR/		5,079,547	January 7, 1992	Fuchigama et al.
/JR/		5,260,980	November 9, 1993	Akagiri et al.
/JR/		5,388,181	February 7, 1995	Anderson et al.
/JR/		5,627,938	May 6, 1997	Johnston, James D.
/JR/		5,661,755	August 26, 1997	Van De Kerkhof et al.
/JR/		5,686,964	November 11, 1997	Tabatabai et al.
/JR/		5,956,674	September 21, 1999	Smyth et al.
/JR/		6,029,126	February 22, 2000	Malvar
/JR/		6,058,362	May 2, 2000	Malvar
/JR/		6,115,688	September 5, 2000	Brandenburg et al.
/JR/		6,182,034	January 30, 2001	Malvar
/JR/		6,240,380	May 29, 2001	Malvar
/JR/		6,766,293	July 20, 2004	Herre et al.
/JR/		6,771,777	August 3, 2004	Gbur et al.
/JR/		6,934,677	August 23, 2005	Chen et al.
/JR/		20020143556	October 3, 2002	Kadatch
/JR/		20040044527	March 4, 2004	Thumpudi et al.

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/JR/		Europe	0910927	April 28, 1999	Gbur et al.
/JR/		Europe	0931386	July 28, 1999	Herre et al.
Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS			
/JR/		Brandenburg, "ASPEC CODING", <i>AES 10th International Conference</i> , pp. 81-90 (1991).			
/JR/		"ISO/IEC 13818-7, Information Technology -- Generic Coding of Moving Pictures and Associated Audio Information -- Part 7: Advanced Audio Coding (AAC), Technical Corrigendum 1," 22 pp. (1998).			
/JR/		Jesteadt et al., "Forward Masking as a Function of Frequency, Masker Level, and Signal Delay," <i>Journal of Acoustical Society of America</i> , 71:950-962 (1982).			
/JR/		Lutfi, "Additivity of Simultaneous Masking," <i>Journal of Acoustic Society of America</i> , 73:262-267 (1983).			

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Examiner's Initials*	Cite No. (optional)	Number	Date	Name
/JR/		5,845,243	12.01.98	Smart et al.
/JR/		5,995,151	11.30.99	Naveen et al.
/JR/		6,115,689	09.05.00	Malvar
FOREIGN PATENT DOCUMENTS				
Examiner's Initials*	Cite No. (optional)	Number	Date	Country
Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS		
/JR/		Yang et al., "An Inter-Channel Redundancy Removal Approach for High-Quality Multichannel Audio Compression," in <i>AES 109th Convention</i> , Los Angeles, California, 8 pp. (September 2000).		
/JR/		Wang et al., "A Multichannel Audio Coding Algorithm for Inter-Channel Redundancy Removal," in <i>AES 110th Convention</i> , Amsterdam, the Netherlands, 6pp. (May 2001).		
/JR/		Yang et al., "Adaptive Karhunen-Loeve Transform for Enhanced Multichannel Audio Coding," Proc. SPIE Vol. 4475, 13 pp., Mathematics of Data/Image Coding, Compression, and Encryption IV San Diego, CA. (July 29 - August 3, 2001).		
/JR/		Vaidyanathan, <i>Multirate Systems and Filter Banks</i> , Prentice Hall Signal Processing Series, Cover page, pp. 745-751 (1992).		
/JR/		"MPEG2 Audio for DVD: the Compromise Choice," 5 pp. (October 1996).		
/JR/		Edler et al., "Perceptual Audio Coding Using a Time-Varying Linear Pre- and Post-Filter," in <i>AES 109th Convention</i> , Los Angeles, California, 12 pp. (September 2000).		

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/JR/		"ISO/IEC 13818-7, Information Technology -- Generic Coding of Moving Pictures and Associated Audio Information -- Part 7: Advanced Audio Coding (AAC)," 174 pp. (1997).	
/JR/		Wang et al., "EE225a Lecture 13: Karhunen Loève Transform and Discrete Cosine Transform," Department of EECS, University of California at Berkley, 10 pp. (March 2002).	
/JR/		Meares, D.J., "Matrixed Surround Sound in an MPEG Digital World," <i>Journal of the Audio Engineering Society</i> , Vol. 46, No. 4, 13 pp. (April 1998).	
/JR/		Stuart et al., "Lossless Compression for DVD-Audio," in <i>AES 9th Regional Convention Tokyo</i> , 4 pp. (1999).	
/JR/		Kuo et al., "A Study of Why Cross Channel Prediction is Not Applicable to Perceptual Audio Coding," <i>IEEE Signal Processing Letters</i> , Vol. 8, No. 9, 3 pp. (September 2001).	
/JR/		Van Assche et al., "Lossless Compression of Pre-Press Image Using a Novel Color Decorrelation Technique," <i>Proc. SPIE, Very High Resolution and Quality III</i> . Vol. 3308, 8 pp. (1998).	
/JR/		Davis, "The AC-3 Multichannel Coder," Dolby Laboratories, 9 pp. (Downloaded from the World Wide Web on August 15, 2002).	
/JR/		Gibson et al., <i>Digital Compression for Multimedia</i> , Title Page, Contents, "Chapter 7: Frequency Domain Coding," Morgan Kaufman Publishers, Inc., pp. iii, v-xi, and 227-262 (1998).	
/JR/		Herley et al., "Tilings of the Time-Frequency Plane: Construction of Arbitrary Orthogonal Bases and Fast Tiling Algorithms," <i>IEEE Transactions on Signal Processing</i> , Vol. 41, No. 12, pp. 3341-59 (1993).	
/JR/		"ISO/IEC 11172-3, Information Technology -- Coding of Moving Pictures and Associated Audio for Digital Storage Media at Up to About 1.5 Mbit/s -- Part 3: Audio," 154 pp. (1993).	
/JR/		ITU, Recommendation ITU-R BS 1115, Low Bit-Rate Audio Coding, 9 pp. (1994).	
/JR/		Solari, <i>Digital Video and Audio Compression</i> , Title Page, Contents, "Chapter 8: Sound and Audio," McGraw-Hill, Inc., pp. iii, v-vi, and 187-211 (1997).	
/JR/		"ATSC Standard: Digital Audio Compression (AC-3), Revision A," 140 pp. (August 2001).	
/JR/		Chen et al., U.S. Patent Application Serial No. 10/017,702, entitled, "Quantization Matrices for Digital Audio," filed December 14, 2001.	

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/JR/		Chen et al., U.S. Patent Application Serial No. 10/017,861, entitled, "Techniques for Measurement of Perceptual Audio Quality," filed December 14, 2001.	
/JR/		Chen et al., U.S. Patent Application Serial No. 10/020,708, entitled, "Adaptive Window-Size Selection in Transform Coding," filed December 14, 2001.	
/JR/		Chen et al., U.S. Patent Application Serial No. 10/016,918, entitled, "Quality Improvement Techniques in an Audio Encoder," filed December 14, 2001.	
/JR/		Chen et al., U.S. Patent Application Serial No. 10/017,694, entitled, "Quality and Rate Control Strategy for Digital Audio," filed December 14, 2001.	

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